

NATIONAL INSTITUTES OF HEALTH

(dollars in millions)

	2000 <u>Actual</u>	2001 <u>Enacted</u>	2002 <u>Request</u>	Request <u>+/-Enacted</u>
Budget Authority.....	\$17,867	\$20,361	\$23,112	+\$2,751
FTE.....	16,022	17,434	17,960	+526

SUMMARY

The FY 2002 budget requests \$23.1 billion for the National Institutes of Health (NIH), an increase of \$2.75 billion, or 13.5 percent, over the FY 2001 level.

Expansion for FY 2002 would be the largest year-to-year dollar increase ever for NIH.

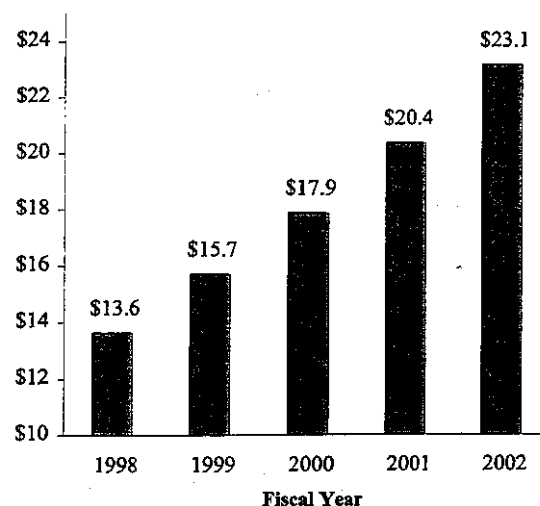
The request reflects a Presidential initiative to double NIH's FY 1998 funding level by FY 2003, with FY 2002 representing the fourth installment

of this five-year plan. This proposed expansion for FY 2002 would be the largest year-to-year dollar increase ever for NIH, and reflects nearly a 70 percent increase over FY 1998.

NIH is the world's largest and most distinguished organization dedicated to maintaining and improving health through medical science. The research that is conducted and supported by NIH ranges from basic research exploring the fundamental workings of biological systems, to studies that examine disease and treatments in clinical settings, to prevention, and to population-based studies of health status and needs. These cutting-edge efforts offer the promise of breakthroughs in preventing and treating any number of diseases.

NIH's budget is composed of 27 appropriations for its Institutes and Centers, Office of the Director, and Buildings and Facilities. The missions of individual Institutes and Centers may focus on a given disease, such as cancer, mental illness, or infectious diseases; on a particular organ, such as the heart, kidney, or eye; or on a stage of development, such as childhood or old age. In other instances, a mission might encompass cross-cutting needs and opportunities, such as the development of research resources or the sequencing and mapping of the human genome.

NIH TOTAL FUNDING
(dollars in billions)



Approximately 84 percent of the funds appropriated to NIH flows out to the extramural community, which supports work by more than 50,000 researchers affiliated with about 2,000 universities, hospitals, and other research facilities. A small percentage of the budget – approximately 11 percent – supports a core program of basic and clinical research activities administered and staffed by NIH's own physicians and scientists. Another four percent provides for research management and support and overall agency administration. In FY 2002, approximately one percent of the budget is devoted to replacing, modernizing, and repairing NIH's intramural research facilities.

With its recent large infusion of resources, NIH has worked diligently to

With its recent large infusion of resources, NIH has worked diligently to make sure that those resources are managed properly.

make sure that those resources are managed properly. The agency is in the process of developing additional strategies to ensure that the FY 2002 and subsequent increases are spent in the most

efficient and effective way, with an eye to maximize budgetary and management flexibility in the future.

RESEARCH THEMES

With the increase requested for FY 2002, NIH plans to focus on four broad areas which it believes have the greatest potential for yielding new scientific knowledge that can lead to innovative strategies for diagnosing, treating, and preventing disease. These areas of unprecedented scientific opportunities include:

Genetic Medicine: The recent deciphering of the human genetic code is one of the greatest achievements in the history of science. This draft map of the

human genome, as well as those of animal models, provides researchers with a means of understanding the most basic elements of human form and function and the role of each gene or combinations of genes in human health and disease. This information can then be used, for example, to develop improved diagnostic techniques and individualized therapies with greater effectiveness and fewer side effects.

Clinical Research: Successfully translating advances in understanding fundamental human biology into improvements in human health requires clinical research. NIH plans to continue its efforts to reinvigorate clinical research by recruiting, training, and retaining clinical investigators; strengthening clinical research centers; and supporting clinical trials, networks, and databases in many disease areas, such as HIV/AIDS, diabetes, tuberculosis, malaria, neuro-degeneration; and mental illness.

Interdisciplinary Research: Increasingly, opportunities for medical research advances are requiring biological scientists to work with experts in other allied fields, such as chemistry, mathematics, physics, computer science, and engineering. By harnessing this interdisciplinary expertise, faster progress can be made in, for example, designing new drugs; imaging molecules, chromosomes, cells, and organs; developing biomaterials; and analyzing the wealth of data being generated about genetic, molecular, and cellular events and how they interact clinically.

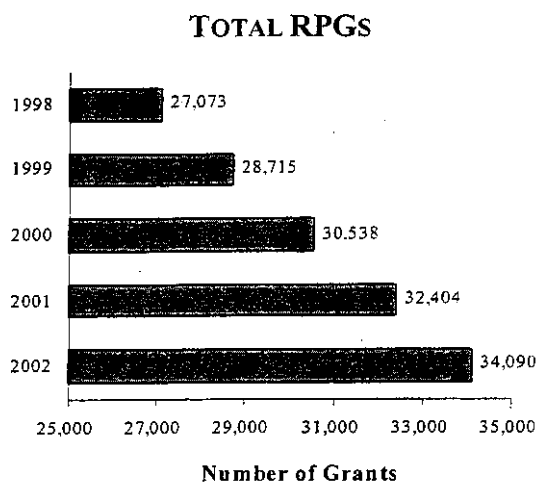
Health Disparities: A key component of the Nation's effort to eliminate health disparities among populations in the U.S. is medical research and research training, and NIH plans to expand its support of these activities. NIH has spent much of the past year developing a Trans-NIH Strategic Plan for Health Disparities. This plan will serve to connect all the components of NIH in constructive, multidisciplinary

collaborations leading to a better understanding of the causes of health disparities; new and improved prevention strategies, diagnostics, and treatments to reduce health disparities; an expanded scientific workforce committed to this goal; and enhanced communication of research results to scientists, health professionals, affected communities, and the public.

The FY 2002 President's Budget also requests \$158 million for the recently established National Center on Minority Health and Health Disparities (NCMHD). This represents an increase of \$26 million, or 20 percent, over the FY 2001 level. These additional funds will be used to establish a Centers of Excellence program to conduct research on minority health and health disparities, and support research training and two new loan repayment programs for extramural minority and health disparities researchers.

RESEARCH PROJECT GRANTS

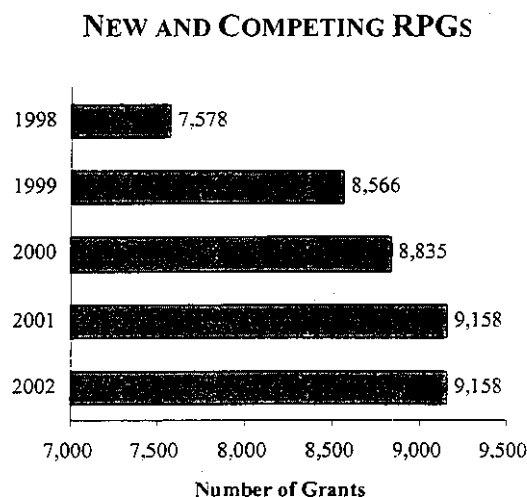
The support of basic medical research through competitive, peer-reviewed, and investigator-initiated research project grants (RPGs) represents 54 percent of NIH's total budget.



In FY 2002, the NIH budget provides \$12.5 billion, a 12.6 percent increase over FY 2001, to fund 34,090 total projects, the highest level in the agency's history. This is

1,686 more grants in total than are expected to be funded in FY 2001.

Within this total, NIH estimates it will support 9,158 new and competing RPGs in FY 2002, the same number as in FY 2001 and itself a record high. NIH plans to adjust the average value of new and competing RPG awards by 4.3 percent to reflect projected increases in the costs of carrying out biomedical research and development. This will raise the average cost of a new research start to about \$348,000, a 36 percent increase over FY 1998.



HIV/AIDS RESEARCH

The FY 2002 budget includes a total of \$2.5 billion for AIDS-related research in the budgets of the NIH Institutes and Centers, as jointly determined by the Director of NIH and the Director of NIH's Office of AIDS Research. This is an increase of \$258 million, or 11.5 percent over the FY 2001 level. It represents a 56 percent increase in funding for NIH AIDS-related research since FY 1998.

In FY 2002, funding will be guided by NIH's comprehensive AIDS research plan, developed by the NIH Office of AIDS Research, in consultation with the Institutes and Centers. Four major themes frame the FY 2002 Plan: 1) prevention research to reduce HIV transmission here in the U.S.

and around the world; 2) therapeutic research to treat those already infected; 3) international research priorities, particularly to address needs in developing countries; and 4) research targeting the disproportionate impact of AIDS on minority populations in the U.S.

HIV/AIDS prevention research includes a focus on developing a safe and effective vaccine; understanding how to change the

Funding for AIDS vaccine research will grow to \$357 million, a 27 percent increase over FY 2001 and 141 percent over FY 1998.

behaviors that lead to HIV transmission; developing effective and acceptable female-controlled chemical and physical barrier methods to reduce the spread of HIV; and exploring lower-cost alternatives to reduce transmission from infected mothers to their infants. NIH

funding for AIDS vaccine research will grow to \$357 million, a 27 percent increase over FY 2001 and 141 percent over FY 1998.

NIH research in basic biology has been the foundation for the development of a new class of drugs, known as protease inhibitors, that are extending the length and quality of life for many HIV-infected individuals. However, many problems remain, making it critical to develop simpler, less toxic, and cheaper drug regimens.

NIH has recently established a new Global AIDS Research effort to expand collaboration with investigators in developing countries. Also, research to address the disproportionate impact of the HIV/AIDS epidemic on U.S. racial and ethnic communities continues to be a high priority.

ANTI-BIOTERRORISM RESEARCH

Included in the NIH budget request for FY 2002 is \$93 million for anti-bioterrorism research and support. NIH will continue to

emphasize generating genome sequence information on potential bioterrorism agents, such as the organisms that cause anthrax, tularemia, and plague. This genomics research, coupled with other basic research on biological threats, is expected to lead to advances in developing rapid diagnostic methods, antimicrobial therapies, and new vaccines for the most likely bioterrorism agents.

In addition, NIH's role in Departmental anti-bioterrorism efforts is being expanded in FY 2002 to include support for the ongoing Oravax smallpox development contract managed by CDC, as well as support of new intergovernmental efforts to develop a next-generation anthrax vaccine.

EXTRAMURAL RESEARCH FACILITIES CONSTRUCTION

For FY 2002, the budget proposes to increase funding for extramural research facilities construction projects by \$22 million, or 28 percent, to \$100 million. This includes \$97 million administered by the National Center for Research Resources (NCRR) and \$3 million provided by the National Cancer Institute (NCI). These funds are awarded on a competitive basis to public and non-profit private entities to expand, remodel, renovate, or alter existing or construct new research facilities in order to expand their capacity to perform or improve the quality of their biomedical and behavioral research. In general, these NCRR grants are limited to 50 percent of the total cost of the facility projects.

BUILDINGS AND FACILITIES

A total of \$307 million is requested for NIH intramural buildings and facilities (B&F) in FY 2002. This investment represents about one percent of the total NIH budget. These funds will be used to expand and modernize the infrastructure for scientists and research support staff working primarily on the 60-year-old NIH campus in

Bethesda, Maryland. Major projects include \$26 million to complete construction of the first phase of the John Edward Porter Neuroscience Research Center, and \$11 million to begin planning and design of the second phase of this complex. When completed, this project will bring together, in a shared facility, basic and clinical neuroscientists from across NIH who are currently fragmented by location and discipline. The resulting improved collaborations in the new Center will speed the rate at which fundamental discoveries are translated into effective therapies for neurological and psychiatric disorders.

The budget also requests \$53 million to begin construction of a centralized, multi-level animal facility, or vivarium. This facility will consolidate ongoing programs in the current aged and sprawling Building 14 through 28 complex, as well as meet modern animal research needs.

For FY 2002, \$21 million is included to begin planning for the repair and renovation of the existing Clinical Center (Building 10) after its hospital and related laboratory components are moved to the adjoining new Mark O. Hatfield Clinical Research Center in FY 2003.

The remaining \$196 million in B&F funds will be used for other specific facilities projects across NIH; including upgrading and expanding mechanical and utility systems in several facilities (\$35 million); a variety of essential safety and health improvements (\$32 million); other interim and transitional renovations for the existing Clinical Center building (\$29 million); completing the final phase of renovations and upgrades to Building 6, the oldest operational laboratory building on the NIH campus (\$20 million); construction of a new parking facility to help make up for the loss of major parking areas due to new construction on the NIH campus (\$14 million); and general repairs and improvements across NIH's nearly 200 total buildings (\$66 million).

NEW INSTITUTES AND CENTERS

In FY 2001, Congress created two new Institutes or Centers within NIH. First, Congress elevated the Office of Research on Minority Health out of the Office of the Director (OD) to become the National Center for Minority Health and Health Disparities (NCMHD). The FY 2002 budget request for NCHMD is discussed above. Second, Congress established the new National Institute for Biomedical Imaging and Bioengineering (NIBIB). The NIH budget includes \$40 million for this new Institute in FY 2002, compared to the \$2 million its predecessor, the OD Office of Bioengineering, Bioimaging, and Bioinformatics expects to spend in FY 2001. NIBIB will be responsible for accelerating the development of new bioimaging, bioengineering, and informatics technologies with clinical and medical research applications; improving coordination in this area at NIH and with other Federal agencies; and supporting the training of researchers skilled in these technologies.

OFFICE OF RESEARCH ON WOMEN'S HEALTH

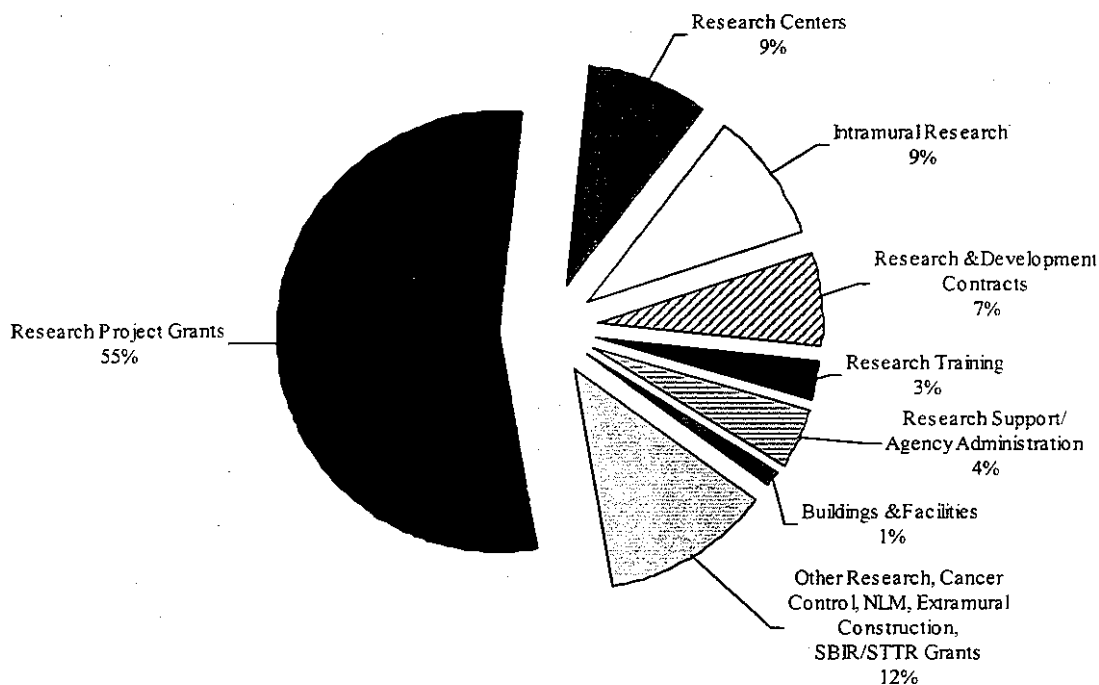
The President's Budget for the NIH OD includes approximately \$50 million for the Office of Research on Women's Health (ORWH), an increase of nearly \$28 million over the FY 2001 level. With this increase, ORWH will support new research activities on women's health and new career development programs for women scientists in international health and interdisciplinary research. These research activities will focus on reproductive health concerns; lung cancer prevention for young girls and women; the impact of care-giving roles on health-related quality of life issues; gender differences in kidney and urologic health; and through new interdisciplinary research centers, multi-systemic diseases in women, such as obesity.

EXTRAMURAL LOAN REPAYMENT PROGRAMS

Congress also authorized several new loan repayment programs for extramural researchers in FY 2001. For FY 2002, NIH plans to spend \$28 million to award 261 contracts for loan repayments to extramural scientists engaged in pediatric and clinical research.

In addition, the budget request for the National Center for Minority Health and Health Disparities includes \$4 million for two other new extramural loan repayment programs; one on clinical research for individuals from disadvantaged backgrounds, and the other related to research on minority health disparities issues.

FY 2002 NIH BUDGET \$23.1 Billion – Percent of Total by Mechanism



NIH OVERVIEW (by Institute/Center)

(dollars in millions)

	2000 <u>Actual</u>	2001 <u>Enacted</u>	2002 <u>Request</u>	Request <u>+/-Enacted</u>
Institutes:				
National Cancer Institute.....	\$3,296	\$3,738	\$4,177	+\$439
National Heart, Lung, & Blood Institute.....	2,025	2,299	2,567	+268
National Institute of Dental & Craniofacial Research...	269	306	342	+36
Natl Inst. of Diabetes & Digestive & Kidney Disease..	1,141	1,304	1,458	+154
National Institute of Neurological Disorders & Stroke..	1,030	1,177	1,316	+139
National Institute of Allergy & Infectious Diseases.....	1,812	2,063	2,355	+292
National Institute of General Medical Sciences.....	1,371	1,540	1,720	+180
Natl Inst. of Child Health and Human Development.....	861	979	1,097	+118
National Eye Institute.....	450	511	571	+61
National Institute of Environmental Health Sciences:				
Labor/HHS Appropriation.....	443	503	562	+59
VA/HUD Appropriation.....	60	63	70	+7
National Institute on Aging.....	688	786	880	+94
Natl Inst. Of Arthritis & Musculoskeletal & Skin Dis...	349	397	444	+47
Natl Inst. On Deafness & Communication Disorders....	264	301	337	+36
National Institute of Mental Health.....	974	1,107	1,238	+132
National Institute on Drug Abuse.....	687	781	907	+126
National Institute on Alcohol Abuse & Alcoholism.....	293	341	382	+41
National Institute for Nursing Research.....	90	105	118	+13
National Human Genome Research Institute.....	336	382	427	+45
Natl Inst. for Biomedical Imaging & Bioengineering.....	0	2	40	+38
National Center for Research Resources.....	674	817	974	+157
Natl Center for Complementary & Alternative Med.....	69	89	100	+11
Natl Center for Minority Health & Health Disparities...	98	132	158	+26
Fogarty International Center.....	43	50	56	+6
National Library of Medicine.....	215	246	276	+29
Office of the Director.....	162	188	232	+45
Buildings & Facilities.....	165	154	307	+153
ONDCP Drug Forfeiture Fund Transfer (NIDA).....	10	10	10	0
BBA/BIPA Diabetes Research 1/.....	<u>27</u>	<u>93</u>	<u>93</u>	<u>0</u>
Subtotal, Program Level.....	\$17,903	\$20,464	\$23,215	+\$2,751
Less Funds Allocated from Other Sources:				
ONDCP Drug Forfeiture Fund Transfer (NIDA).....	-10	-10	-10	0
BBA/BIPA Diabetes Research 1/.....	<u>-27</u>	<u>-93</u>	<u>-93</u>	<u>0</u>
Subtotal, Budget Authority.....	\$17,867	\$20,361	\$23,112	+\$2,751
Labor/HHS Appropriation.....	17,807	20,298	23,042	+2,744
VA/HUD Appropriation.....	60	63	70	+7
FTE.....	16,022	17,434	17,960	+526

1/ These funds were pre-appropriated in the Balanced Budget Act of 1997 and the Benefits Improvement and Protection Act of 2000.

NIH OVERVIEW (by Mechanism)

(dollars in millions)

Mechanism	2000 <u>Actual</u>	2001 <u>Enacted</u>	2002 <u>Request</u>	Request <u>+/-Enacted</u>
Research Project Grants.....	\$9,769	\$11,117	\$12,518	+\$1,401
[# of Non-Competing].....	[21,703]	[23,246]	[24,932]	[+1,686]
[# of New/Competing].....	[8,835]	[9,158]	[9,158]	[0]
[Total # of Grants].....	[30,538]	[32,404]	[34,090]	[+1,686]
Small Business Innovation Research (SBIR)/ Small Business Technology Transfer (STTR) Grants.....	\$362	\$414	\$474	+\$59
Research Centers.....	1,562	1,857	2,080	+223
Research Training.....	540	592	645	+54
Research & Development Contracts.....	1,157	1,326	1,595	+268
Intramural Research.....	1,761	1,959	2,159	+200
Other Research.....	1,435	1,675	1,878	+203
Extramural Research Facilities Construction.....	77	78	100	+22
Research Management and Support.....	601	693	779	+86
National Library of Medicine.....	215	246	276	+29
Office of the Director.....	162	188	232	+45
Buildings and Facilities.....	165	154	307	+153
NIEHS VA/HUD Appropriation (Superfund).....	60	63	-70	+7
ONDCP Drug Forfeiture Fund Transfer (NIDA).....	10	10	10	0
BBA/BIPA Diabetes Research 1/.....	<u>27</u>	<u>93</u>	<u>93</u>	<u>0</u>
Subtotal, Program Level.....	\$17,903	\$20,464	\$23,215	+\$2,751
Less Funds Allocated from Other Sources:				
ONDCP Drug Forfeiture Fund Transfer (NIDA).....	-10	-10	-10	0
BBA/BIPA Diabetes Research 1/.....	<u>-27</u>	<u>-93</u>	<u>-93</u>	<u>0</u>
Subtotal, Budget Authority.....	\$17,867	\$20,361	\$23,112	+\$2,751
Labor/HHS Appropriation.....	\$17,807	\$20,298	\$23,042	+\$2,744
VA/HUD Appropriation.....	\$60	\$63	\$70	+\$7
FTE.....	16,022	17,434	17,960	+526

1/ These funds were pre-appropriated in the Balanced Budget Act of 1997 and the Benefits Improvement and Protection Act of 2000.